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INTERNATIONAL CROP-REPORTING SERVICE.

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The collection of agricultural statistics on a more uniform plan and the interchange between different countries of the results of such statistical inquiries, has been a subject of great interest to statisticians and economists for the last half century. Four international organizations have been actively engaged in the study of agricultural statistics:

1. International Statistical Congresses,	1853–1876
2. International Agricultural Congresses,	since 1873
3. The International Statistical Institute,	since 1885
4. The International Institute of Agriculture,	since 1909

1. Before the formation of the International Statistical Institute which took place in 1885, a series of *International Statistical Congresses* was held, dating from the Brussels Congress of 1853. At this very first meeting resolutions were passed defining the object of agricultural statistics as being, " to ascertain such facts as will give a complete knowledge of the conditions, the progress, and the results of the agricultural industry of a country at a certain period "; and proposing several important statistical undertakings in the different countries, with the object of securing a wider and more uniform knowledge of the world's agricultural wealth and possibilities. The last International Statistical Congress, which was held at Budapest in 1876, adopted a number of important resolutions, one of which was that, " each country adopt a

system of agricultural statistics upon uniform lines which will permit of the formation of international statistics."

2. Beginning with a meeting in Vienna in 1873, there have been held ten *International Agricultural Congresses,* at all of which a large number of questions concerning agriculture have been treated, especially from a technical point of view. But some attention was given to agricultural statistics in the resolutions and proceedings of the four Congresses of, Vienna 1873, Paris 1889, Lucerne 1898 and Rome 1903. In the Proceedings of the first Congress in 1873 mention is made of the Necessity of establishing an international *entente,* for the purpose of securing more statistical data in regard to agriculture. Even then it was noted that the entirely different organizations, usages, and methods of the different countries produce meagre statistical results so lacking in uniformity that accurate comparisons are secured with the greatest difficulty or not at all. By establishing an international *entente* it was hoped to procure a greater wealth of agricultural statistical information, and in more useful form for establishing comparisons.

3. The *International Statistical Institute* was founded in 1885 and holds sessions in different countries every two years. Its membership is composed of a limited number of eminent statisticians and economists representing the principal countries of the world, and its reports and proceedings afford a wealth of interesting and valuable suggestions upon a great number of statistical topics. The meetings held at Berne 1895, St. Petersburg 1897, Budapest 1901, and London 1905, considered and discussed a number of important subjects bearing upon statistics of areas, yields, and monthly conditions of agricultural products. These discussions have greatly assisted in emphasizing the importance of agricultural statistics, and have played a signal role in the advancement of statistics in each country during the years following the adoption of resolutions by the Institute.

4. The hopes expressed, in the resolutions of these International Congresses, for the establishment of an international *entente* and the formation of some international agricultural statistical service was destined to be realised in part some

thirty years later by the organization of the *International Institute of Agriculture.*

Much credit for the initiation of a project to secure more complete and uniform scientific and statistical data of agriculture, is due to the earnest and persistent efforts of an American citizen, Mr. David Lubin, of California, who, believing that the farmers and the commercial interests of his country as well as of the whole world would be benefited by a closer coöperation of the farming interests, urged the formation of the International Institute of Agriculture. Several years ago his plan was favorably considered by the King of Italy, who invited the different governments to meet in conference at Rome to consider the formation of such an Institute. The time was ripe for the favorable consideration of such a proposal by the statistical and agricultural authorities of the different countries, and this invitation met with ready response. A conference was held in Rome in 1905., at which all of the principal countries of the world, including the United States, were represented by delegates. That conference agreed upon the text of a Convention, dated June 7, 1905, which outlined the scope and jurisdiction of the proposed Institute. This text was submitted to the governments taking part in the conference for approval, and has been ratified by the following forty-seven countries:

Germany, Argentine, Austria, Hungary, Belgium, Brazil, Bulgaria, Chile, China, Costa Rica, Cuba, Denmark, Ottoman Empire, Egypt, Equador, Spain, United States of America, Ethiopia, France, Tunis, Great Britain and Ireland, Australia, Canada, British India, New Zealand, Mauritius, Greece, Italy, Erythrea and Italian Somaliland, Japan, Luxemburg, Mexico, Montenegro, Nicaragua, Norway, Netherlands, Peru, Persia, Portugal, Roumania, Russia, Salvador, San Marino, Servia, Sweden, Switzerland, Uruguay.

The countries adhering to the Convention of the Institute, together with their colonies, dependencies and protectorates, represent nearly all the world's population, and almost the entire area, production and commerce of agricultural products of the world. In fact, the countries represented in the Institute include an approximate total population of 1,615,574,000 and a total area of 47,169,786 square miles, compared with a population of 38,833,000, and an area of 2,517,038 square miles in the countries as yet unrepresented in the Institute. Thus, the countries included in the Statistical Service of the Institute embrace nearly 98 per cent. of the population, and 95 per cent. of the area of the world.

It is provided in Article 10 of the Convention that, " Colonies may, at the request of the countries to which they belong, be admitted to form part of the Institute on the same conditions as the independent countries." It will be noted that under this provision a number of colonies, dependencies, etc., are included as separate countries in the list of countries adhering to the Institute. The Institute plans and hopes to secure through the governments of adhering countries, agricultural statistics and information for colonies and protectorates which have not individually adhered to the Convention of the Institute.

On account of the different dates and seasons of sowing and harvesting agricultural products in the various parts of the world, the countries have been grouped by the Institute in geographical zones: North, Central, and South, in order to facilitate the collection and dissemination of agricultural statistics.

The Institute is housed in a new and modernly equipped building at Rome of sufficient size for the accommodation of several hundred officials and clerks. This building was constructed for the purpose and donated to the Institute by the King of Italy. The running expenses of the Institute are met from an annual fund of about $200,000 secured by a yearly quota paid by each of the adhering countries, and an endowment by the King of Italy.

The organization of the International Institute of Agriculture is composed of a General Assembly, a Permanent Committee, and the Administrative Staff of the Institute. The General Assembly — a kind of International Agricultural Parliament — meets at stated intervals, on dates fixed by the last General Assembly, for the purpose of examining and approving or disapproving the actions of the Permanent Committee and the conduct of the Institute in general. It is composed of delegates from the adhering nations; each nation being entitled to a fixed number of votes, which is determined by the group in which the nation has elected to be placed and the amount contributed annually for the support of the Institute. The Permanent Committee is composed of one delegate located in Rome from each adhering country; and practically forms a board of governors for the purpose of supervising the actual work of the Institute. This Committee is resolved into three Sub-Commissions each of which has charge of a distinct branch of the work of the Institute.

According to Article 9*, paragraphs *a* and *b*, of the Convention of the Institute, one of the principal objects of theInstitute is to collect, compile, coördinate, and unify all *official* statistical information relating to agricultural products, and to encourage the collection of such information by the countries which do not now have a regular statistical service for this work so that properly compiled information in regard to the areas, conditions, and production of agricultural products can be disseminated to parties interested throughout the world. By means of its statistical service, the Institute plans to present agricultural statistics furnished by the official statistical services of the different countries, and thereby to publish more complete and reliable information as to the growing crops than is now available to the world; with the hope of securing closer correspondence between the prices of agricultural products and the real conditions of supplies.

**Article 9*:—The Institute, confining its operations within an international sphere, shall:

(*a*) Collect, study and publish as promptly as possible statistical, technical or economic information concerning farming, both vegetable and animal products, the commerce in agricultural products, and the prices prevailing in the various markets;

(*b*) Communicate to parties interested, also as promptly as possible, all the information just referred to;

(*c*) Indicate the wages paid for farm work;

(*d*) Make known the new diseases of vegetables which may appear in any part of the world, showing the territories infected, the progress of the diseases, and if possible, the remedies which are effective in combating them;

(*e*) Study questions concerning agricultural coöperation, insurance and credit in all their aspects, collect and publish information which might be useful in the various countries in the organization of works connected with agricultural coöperation, insurance and credit;

(*f*) Submit to the approval of the Governments, if there is occasion for it, measures for the protection of the common interests of farmers and for the improvement of their condition, after having utilized all the necessary sources of information; such as the wishes expressed by international or other agricultural congresses or congresses of sciences applied to agriculture, agricultural societies, academies, learned bodies, etc.

All questions concerning the economic interests, the legislation and the administration of a particular nation shall be excluded from the consideration of the Institute.

This service, however, does not comprise the entire scope of the Institute, whose jurisdiction embraces a large number of other objects of large value and interest, all of which are embodied in the Convention of the Institute above referred to. But it is the purpose of this paper to outline only the scope of the Service of Agricultural Statistics of the Institute.

Many difficulties confront the statistician in drawing up a plan for the International Crop Reporting Service; a system of measuring the conditions of crops; and a service, in a way, supplimentary to the system which each country follows.

In the first place, it is provided under Article 2 of the Convention that the Institute is to be a government or state Institution, and in Article 20 of the " Rules and Regulations " governing the Institute, that the documents and statistical information required by the Institute are to be supplied directly by the different Governments adhering to the Convention, or under their responsibility, or through their intervention. Therefore, the Statistical Service of the Institute, in collecting and preparing statistics of agricultural products, is limited absolutely to information furnished directly by the Governments of the adhering countries, or by their regular statistical services, or under the responsibility and intervention of the several countries.

Also, wide diversities exist at the present time between the data furnished by the different countries, owing to differences in definitions and methods of expressing the information, differences in periods of time to which the data relate, and the different dates of publication. The statistics of different countries covering the same subject matter are now often meagre and incomplete. Thus, the preparation of comparative statements of international statistics of agricultural areas, conditions and productions is rendered very difficult and sometimes impossible.

For example, only a small number of countries have heretofore prepared and published reports with the object of showing the monthly condition and progress of the growing crops; and they are not comparable. The United States and Canada indicate the " condition " of their growing crops in terms of a percentage of a " normal " crop, and a " standard " crop respectively. Hungary indicates monthly the total estimated yield for its cereals in absolute figures. Great Britain expresses the "condition " of her crops in terms of a percentage of the " average " yield. Other countries express their condition reports by figures, but these are only conventional symbols qualifying the condition of the crops. Thus Germany and Austria use the following scale, 1, meaning " very good "; 2, " good "; 3, " average "; 4, " poor "; 5, " very poor." Bulgaria uses a scale of points ranging from 6 to 1. France uses a different scale in which 100 means " very good "; 80, " good "; 60, " fair "; 50, " passable "; 30, " mediocre "; 20, " bad." Sweden employs the same scale as Germany, but inversely applied: 1, " very poor "; 2, " poor "; 3, " average "; 4, " good "; 5, " very good." Other countries make use of qualifying adjectives. Thus Argentina expresses conditions by the words " very good," " good," " regular," " bad." Austria uses the words " very good," " good," " mediocre," " poor." Mexico, the words " good," " regular," " bad "; and Holland, the words " excellent," " very good," " good," " pretty good," " average," " pretty bad," " bad," " very bad." There are other countries which make use of no technical terms, but report the condition of their crops by describing the meteorological conditions and the appearance of the fields.

Another difficulty is that the condition reports have been published by the different countries at divergent and even at undetermined dates. The United States and Germany publish them every month from April to December; Austria once a month from April to October; France, Belgium and Mexico once every month; Great Britain on the 15th of July, 15th of August, and 15th of September; Ireland and Sweden in June, July, September and October; Canada once a month from May to December; Hungary twice a month from April to October, and once a month from November to

March; Holland in April, June, July and September; Russia once a month from April until August. Thus while an information service already exists in many countries, the systems employed differ one from another, although they all have the same important aim in view, *i.e.*, to follow step by step the development of the growing crops.

Notable divergences also exist between the statistical statements published by the different countries in regard to harvest results or yields. In studying the question of these statistics we must distinguish between countries which publish forecasts of harvest yield whilst the harvest is being reaped, and before publishing their final returns, and countries which only publish a final statement when the harvest is over.

To the first category belong: Argentina, which publishes toward the close of the year a forecast of the harvest [*pronostico de la cosecha*]; the United States and Canada, which publish preliminary returns of harvest yields progressively during the period of harvesting, and follow the period of harvest with final statements in December of each year; France, which publishes, in August and September, preliminary data on the harvest yield of winter and spring cereals; Japan, which publishes in June the approximate results of its cereal harvest; Russia, which publishes in the middle of August a forecast of the cereal yield; Switzerland, where the *Sécrétariat Suisse des Paysans* publishes a statistical forecast just before the harvest for cereals and before the vintage for grapes; Italy, which, in accordance with its new agricultural statistical organisation, will publish shortly before the harvest of its principal products a forecast of the amount produced; and Hungary, which publishes a forecast of the probable harvest yield expressed in absolute figures. On the other hand, Germany, Austria, Belgium, Chile, Denmark, Great Britain, Ireland, Luxemburg, Mexico, Norway, Holland, Roumania and Sweden only publish returns of harvest yields when the crops are already harvested. It should be noted that Denmark and Sweden publish preliminary statistics, but in the case of Denmark the quality of the yield only is indicated, in accordance with a conventional formula, and in Sweden the preliminary statistics are drawn up at the end of the harvest and published toward the end of the year. As to cereals, it should be remarked that important differences occur between the dates of publication of the statistical returns, whether preliminary or final, in the different countries. Argentina publishes toward the end of the year, *i.e.*, immediately after the harvest; Great Britain publishes in November; Germany and Austria in December; Ireland and Norway toward the end of the year; whilst Belgium, Denmark, Holland, Roumania and Sweden only publish the results of their harvests in the following year. Roumania publishes in the beginning of the year, Denmark in May, and Sweden at the close of the year following the one to which the harvest data relate.

This brief résumé shows that almost all countries publish final statements of their harvest yields, but that their publication is generally long delayed, often until the year following that of the harvest to which they relate. A few countries also make preliminary statements of harvest yields, published relatively soon after the harvest. The number of countries which publish official estimates of the probable harvest yield is very limited, but such information is sometimes indirectly supplied in the condition reports, especially when they are expressed as percentages of a normal crop, as in the case of the system in vogue in the United States. The agricultural statistics of each country have heretofore been selected and compiled to suit local circumstances. But administrative and political divisions as well as conditions generally differ in the several countries to such an extent that uniformity in these statistics has been impossible. The uniformity existing has been local, where some governments have long established services of agricultural statistics producing comparative data in certain form and available for a series of years. In order to make the general situation clear, the Institute has collected from the different adhering countries a large amount of information bearing upon the organization of their statistical services and the methods used in conducting them. The data have been presented in a comparative bulletin, published under the title " The Organization of Services of Agricultural Statistics in Different Countries." The bulletin shows how such services are successfully organized and operated in many countries, and is useful to other countries contemplating the organization of similar statistical services, or considering changes in services already organized for the purpose of providing the Institute with the statistical data it requires. The data given in the Bulletin furnish many items of interest to the student of international statistics.

It is one of the primary objects of the International Institute of Agriculture to secure greater uniformity between the agricultural statistical services of the different countries, and thereby a greater comparability between the information officially reported by the several countries and more complete and reliable statements in regard to the conditions and the yields of crops throughout the world than is now available. In order to attain this object it is necessary that some countries modify or adapt their services of agricultural statistics to the statistical plan adopted by the Institute; and that other countries which have no services of agricultural statistics, organize statistical services capable of supplying the Institute with the necessary information. It is within the province and purport of the Institute to use its good offices and influence to bring this about.

Without waiting for the development of greater uniformity in the statistical methods and statements of the different countries, the Institute has decided to proceed to the organization of a Regular Crop-Reporting Service; and a plan for such service was prepared and presented to the second session of the General Assembly of the Institute, held in Rome in December, 1909. As a result, it was decided to begin on January 1, 1910, an International Crop-Reporting Service, and regular monthly reports are now published in the " Bulletin of Agricultural Statistics," an official publication of the International Institute of Agriculture, under the authority of the Permanent Committee, issued regularly on Saturdays, about the 20th of each month. The French language has been adopted for the proceedings of the Institute, and the *official* publication of agricultural statistics is made in the French language in the *Bulletin de Statistique Agricole;* however, in order to communicate the information to all parties interested, the Bulletin has been translated to, and disseminated in the English, German, Italian and Spanish languages.

The decisions in regard to the plan of the Statistical Service, and a brief outline of the Service for 1910-11 follow:

Decisions of the General Assembly.

1. The General Assembly considers it necessary that the Information Service of the Institute commence on January 1, 1910, for the following products: wheat, rye, barley, oats, maize, rice, cotton.

2. The basis of the Regular Information Service should be the agricultural statistics of all the countries adhering to the Convention of 1905. These statistics should comprise as a minimum:

(*a*) Periodical statements of total area, and of divisions into principal categories of products;

(*b*) Annual statement of sowing and planting for the above mentioned products;

(*c*) Statement of the area sown, and the conditions under which sowing took place in the different seasons of the year (rains, drought, frost, etc.);

(*d*) Regular periodical and monthly inquiries should be made at the same time in all countries as to the condition of the products, and communication of the results made to the Institute; inquiries should also be made, and information sent, relating to the same date, for all countries, as to unusual weather conditions, diseases of plants, and invasion of harmful insects, influencing the condition of the products;

(*e*) *Approximate estimate* as to the probable yield, in relative or absolute figures, or in a per cent. of an average harvest, to be made one month before harvest time, and at the same period as the statement as to conditions of the products for the same month;

(*f*) *Preliminary statement* as to the yield of the different products, as soon as possible;

(*g*) *Final statement* as to the yield of the different products; to be made as soon as possible after the harvest, and conforming to the different zones in the countries.

3. The General Assembly requests the Governments to reorganize their services of agricultural statistics, if such services exist, otherwise to adopt such a service as will enable replies to be made to the above mentioned questions for the Information Service of the Institute. The Assembly abstains from proposing any method for the collection of data, or any uniform service, being of opinion that the methods should be chosen by the Governments themselves, according to the particular conditions existing in each country.

The Assembly also considers that the information necessary for the Regular Information Service regarding the condition, development and production of different products should be sent to the Institute on the same date and in similar form by all countries, thus insuring the simultaneous despatch to the Institute, (1) of the original data published by the different Governments; (2) of the results of the transformation of these data into percentages of an *average* harvest of each respective country; (3) of a definite figure expressing the average production per hectare.

The General Assembly recommends that the monthly data be collected for each country on the first of the month, forwarded to the Institute on the 15th, and published by the latter on the 20th.

It is of the greatest importance that the preliminary and final statements of harvests be known by the Institute as soon as possible after the date of collection of the data.

4. The General Assembly states that, without awaiting the future development of agricultural statistics, the Institute's Regular Service of Information should commence its work on January 1, 1910; and the Assembly requests the Governments to reply to the questions of the Institute, and to forward on the above mentioned dates, the necessary information regarding area, condition and the probable and final yields of the different agricultural products; in cases where it is impossible to supply such information, more general statements, of a qualitative nature only, might be forwarded. In the Bulletin published by the Institute, mention should be made of the nature of the information contained therein.

5. The General Assemblv also proposes that the Informa-

tion Service of the Institute request information from the Governments regarding the following products: silk, cocoons, sugar, tobacco, coffee, wine, alcohol from wine, olives, olive oil, hay and cattle, and that such information be published as early as possible.

6. Recognizing the necessity of elucidating the question as to the utilization of the statistical statements relating to commerce, stocks, importations, exportations, and products in transport, for the Service of Regular Information, the General Assembly invites the Permanent Committee to commence and complete the necessary studies in order to submit propositions on this subject to the next session of the Assembly.

7. The General Assembly is of opinion that the Institute should extend its work as soon as possible to the production, commerce and consumption of other important vegetable products, and of animal products, and invites the Permanent Committee to commence preparatory studies to this effect.

Outline of the Statistical Service for 1910-1911.

Complying with the Decisions of the General Assembly, the Institute began its service with the crops of 1910, purposing to report upon them progressively, from the time of seeding or planting of cereal crops in the Autumn of 1909; then reporting the "condition" of the growing crops during the months following the period of planting, and, finally, preparing estimates and reports in regard to harvest results.

The following outline shows the different stages to be included in the Crop-Reporting Service for 1910-1911:

I. *Information to be repeated during the month following the completion of seeding.*

(a) Area sown in actual figures, or if such figures cannot be given, in a percentage of the area of the previous year. The replies received in the form of percentages are reduced by the Institute to absolute figures if possible, the actual replies as given by the country being added as footnotes.

(b) Condition under which sowing took place, to be given in words, with notation of any particular phenomena which prevailed during the preparation of the ground, or during the period of seeding.

II. *Information to be reported during the months following the period of planting, and continuing until the month preceding the harvest.* (The word *harvest* to be understood as the time of reaping for cereals, and the time of picking for cotton.)

(c) " Condition " of the growing crops.

Replies to be made in figures showing the condition of growing crops in the form of a percentage; 100 representing an " average " condition which, if uninfluenced by abnormal circumstances, would give a probable yield per hectare (or unit of surface), equal to the average yield of the past ten (10) years.

(d) In the case of a country which already prepares and publishes crôp condition reports employing other methods of expression than the " average " just referred to, such country is requested to send the reports to the Institute in figures showing the reduction of the original reports to percentages of an average harvest.

Abnormal weather conditions, diseases of plants, or invasion of harmful insects, seriously influencing the condition of growing crops will be reported in words.

III. *Information to be reported during the months immediately preceding the commencement of harvest.*

(e) *Approximate estimate* of the yield, to be given in actual figures, or in estimated yield per hectare, or in a percentage of an average of the total harvests for the past ten years, or in percentage of the harvest of the preceding year.

The data for the year are to be transformed by the Institute into relative figures for publication, and replies from the countries are to be reproduced in the original form as foot notes.

(f) " Conditions " of the growing crops. (As under " c " or " d ".)

IV. *Information to be reported monthly from the beginning until the completion of harvest.*

(g) Area harvested is to be given in actual figures, or, if this cannot be given, in a per cent. of the area of the previous year.

(h) Correction of the *approximate estimate* mentioned under " e."

V. *Information to be reported during the month following the completion of harvest.*

(i) *Preliminary statement* of the yield, in actual figures; all data received in other form being reduced to actual figures by the Institute if possible.

VI. *Information to be reported during the months following the completion of the threshing of cereals.*

(j) *Final statement,* in actual figures, of the total production.

An effort has been made to organize this international service into a dynamic, potential, practical service; and it is patterned after the system possessed by the Federal Government of the United States, which is probably the oldest and most highly organized system of monthly crop-reporting in existence. The Institute has met with quite a measure of success in starting the service, although the data are necessarily incomplete in the beginning months and years of the service. Notices have been received by the Institute from a number of countries, referring to the action taken by their respective Governments in relation to the Decisions of the General Assembly and the supplying of information to the Statistical Service of the Institute. In accordance with these notices, complete monthly reports are being received regularly from Belgium and Hungary, and also Bulgaria, Canada, Denmark, Sweden, United States, Luxemburg, Japan, Netherlands, Switzerland, Roumania, and Tunis, as to the " conditions " of the crops, expressed in figures in the form of percentages of an "average,"—the system adopted by the Institute. It may be added that these reports as to conditions of crops now being made by a number of countries to the Institute, are innovations; such information has not been published heretofore, but has been prompted by the Institute. The following named countries, which already prepare and publish crop condition reports but use methods of expression differing from the system adopted by the Institute, have *reduced* their own reports to figures representing the percentage of an " average " requested by the Institute, and they are forwarding them regularly in reply to the questionnaires of the Institute:

United States: reduction from regular reports which are issued in the form of percentage of a "normal."

Canada: reduction from regular reports which are issued in the form of a percentage of a "standard."

Bulgaria: reduction from regular reports which are issued in the form of "points": 6 to 1.

Sweden: reduction from regular reports which are issued in the form of "points": 5 to 1.

Luxemburg: reduction from regular reports which are issued in the form of "points": 1 to 5.

New reports have also been received from a number of countries as to area sown to winter crops of 1909–10; and yields of crops or harvest results in the countries south of the equator. These latter may be found in tabular form in the "Bulletins" of the last several months.

In projecting the crop-reporting service the organizers of the Institute have likened the Service to that of a separate country, only in the international service, the governments of the different countries are the suppliers of information — the correspondents. There are, however, other reasons for such an international service than the demands for statistics of crops within the several countries. For the aim of the Institute is to systematize information on agricultural production, and to provide, by means of official statistical data, a reliable and authentic basis for the formation of prices. Under the modern facilities of transportation and communication, the prices of many agricultural products are fixed or influenced at frequent intervals — often daily — at the world's grain and cotton centres by large market organizations. In these centres is collected and assembled official and private information bearing on the probable yields and conditions, supplies and stocks available, amounts on the routes of commercial movement, and on demands for the products; in fact, all news tending to influence the prices. In many instances the data are gathered by private and commercial agencies in a practical, honest and effective manner, and are of value to the agricultural and commercial interests. On the other hand, some reports of prospective yields and the conditions of the growing crops are inconsistent, incomplete and inaccurate, and published in an exaggerated form which tends to influence opinions of the true conditions — and also naturally, the prices. Also agencies are located at the world's market centers which may circulate false reports, and combine to raise or lower prices artificially and temporarily; by manipulating prices they frequently instigate unhealthy speculation and violent fluctuations in the prices of agricultural products.

One of the purposes in forming the International Institute of Agriculture was to secure a surer and more reliable worldwide service of information in regard to the products of agriculture, which may serve as a check upon the evils of inaccurate and misleading reports. This check, in order to be effective, must be based on the service of the Institute, and founded on official statistics collected by government organizations and furnished to the Institute by the different countries themselves. The official statistical investigations can be made to cover all parts of each country and of the world, and to yield much more complete, accurate and reliable information than is otherwise obtainable.

But the data furnished must be as complete, accurate, prompt, and comparable as possible; and to this end the Institute seeks to secure greater coöperation between the countries. A number of countries adhering to the Institute have taken steps towards adapting their individual statistical services to the uniform plan of service adopted by the Institute for its International Service. As a result of the greater uniformity secured in some countries, and the perfecting of services of agricultural statistics in other countries, the whole world will have what some countries with well organized statistical services now give for their own territory.

Briefly stated, the present plan of the initiative service contemplates collecting, coördinating and publishing monthly reports or bulletins in regard to crops throughout the world, grouping the data for all countries in comparative statements so far as possible. It is the purpose of the Institute to undertake each year the collection and prompt publication of information relating to the area seeded or planted and the conditions under which planting took place; then to report regularly the "Conditions" of the growing crops during the months following the period of planting, and finally, to prepare preliminary and definite statements in regard to harvest results or productions. It is planned to assemble and present the data in every instance in uniform and comparable statements, and with totals, in order that the reports of the Institute may gradually assume an inherent value for comparative purposes when a series of reports become available.

In general, the Statistical Service of the Institute consists in the collection, coördination and dissemination of statistical information, concerning agricultural products of the world, confining its efforts to securing *official* data from all countries, harmonizing differences, and reducing the results to comparative bases, so that the information may be presented in a manner which will be of value to the agricultural interests of the world.

Statistical information which covers only parts of the area devoted to a crop of world-wide cultivation and distribution may be misleading, and the producers and others interested need knowledge of the entire crop expressed as totals or quantitative statements. Such definite forms of statistics have the advantage of being easily interpreted by all concerned, and are capable of comparison from month to month or from year to year. Moreover, they provide the agricultural and commercial world with the only means of ascertaining the factors by which the equilibrium is established between the countries producing an excess of a certain product, and those requiring additional supplies to make good a deficit of the same product; and of ascertaining the true facts which tend to assist the markets to resolve the balances between supply and demand into fair current prices.

The International Institute of Agriculture, with its International Assembly or Parliament meeting every couple of years, its International Permanent Committee or Board representing 47 different countries meeting each month, and its international staff of experts and clerks working side by side each day, is unique, and one of the most advanced experiments in international coöperation which has ever been made among the family of nations.